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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,095	02/08/2002	James B. Klassen	KLASN.001A	9459

20995 7590 07/27/2005

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EXAMINER	
TRIEU, THAI BA	
ART UNIT	**PAPER NUMBER**
3748	

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/072,095	KLASSEN, JAMES B.	
	Examiner	Art Unit	
	Thai-Ba Trieu	3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 April 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *31-37* is/are allowed.

6)☒ Claim(s) *1-7,9-13 and 17-29* is/are rejected.

7)☒ Claim(s) *8,14-16 and 30* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *04/11/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on April 11, 2005 has been entered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 7 17, 20-23, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Comprotek (Pub. Number 25 25 335 A1).

Regarding claims 1, 17, and 23, Comprotek discloses a device to convert energy by displacing fluid, the device comprising:

an outer rotor (7) adapted to rotate about a first axis of rotation and comprising:

a plurality of fins (10) each comprising a first surface and a second surface that partially define a chamber region (9) interposed

thereinbetween where a first fin and a second fin are members of the said plurality of fins (10) and are adjacent to each other (See Figures 1-3), and

a first reference radius extends through the first fin and a second reference radius extends through the second fin, a first surface of said first fin is a first defined distance from said first reference radius with respects to the radial location along said first reference radius, and a second surface of the said second fin is a second defined distance from the said second reference radius with respects to the radial location along the said second reference radius (See Figures 1-3), and

the number of the chambers (9a, 9b, 9c) indicated by variable X, and

an outer reference dimension circle that is concentric with said first axis of rotation (Not Numbered) of the said outer rotor (7) and the outer reference dimension circle having a radius r_o (See Figures 1-3);

a plurality of inner rotors (8) each adapted to rotate about a second set of axes of rotation and each inner rotor comprising an inner reference circle that is concentric with the axis of rotation of each inner rotor and each inner reference circle intersecting the outer reference circle of said outer rotor (7) at an intersect point where the velocity of the inner rotor and outer rotor are the same at said intersect points, the inner reference circles each having a radius q, the inner rotors further each comprising a plurality of legs the number of said legs (Not Numbered) for each inner rotor (8) is indicated by variable Λ where a first leg

that is a member of said legs comprises a foot region the foot region (Not Numbered) comprising:

a heel region (Not Numbered) comprising a first reference point that is adapted to rotate with said first reference circle where said first reference point is non constant perpendicular distance from the said first reference radius of the outer reference circle with respects to rotation of the inner and the outer rotor, and the heel region further comprising a first engagement surface that is a first defined distance from the said first point where the said first defined distance of the heel region and the first defined distance of the first surface of the said first fin are collinear and their sum is non constant with respects to rotation of the inner rotor (8) and the outer rotor (7) (See Figures 1-3),

a toe region (Not Numbered) comprising a second reference point that is positioned on said inner reference dimension circle, a second engagement surface that is a second defined distance from the reference point where the second defined distance of the toe region and the second defined distance of the second surface of the second fin are collinear and their sum is non constant with respects to rotation of the inner rotor (8) and outer rotor (7) (See Figures 1-3); and

a casing (1) having an inner chamber region that is adapted to house said outer rotor and allow the outer rotor to rotate therein, the casing comprising;

a fluid entrance system (3) comprising a duct to communicate with the chamber region (9) of the said outer rotor (7) (See Figures 1-3), and

an interior cavity (11) adapted to house the said inner rotors (8) and allow the inner rotors (8) to rotate therein (See Figures 1-3),

whereas the said variables Λ, X , r_i, r_o are constrained by the equation Λ / X = ri / ro, the foot region of said first leg is adapted to engage the chamber region where the first engagement surface of said heel region engages said first surface of a first fin and said second engagement surface of the said toe region of said first foot is adapted to engage the second surface of a second fin to form a sealed operating chamber where rotation of the said first inner rotor and the said outer rotor causes displacement of fluid in the sealed operating chamber (See Figures 1-3, Pages 4-8, lines 1-34).

Regarding claims 7 and 27, Comprotek further discloses the ratio of r_i/ r_o being an integer value (Inherently seen in Figures 1-3).

Regarding claims 20-22, Comprotek discloses the outer rotor (7) being adapted to receive torque and the said sealed chamber being adapted to compress gas; the tangential distance between said first surface faces second surface of the two adjacent fins converging with respects to the traveling radial inward; the tangential distance between the said first surface faces second surface of the two adjacent fins being not constant (See Figures 1-3, Pages 4-8, lines 1-34).

Claim Rejections - 35 USC § 102/§ 103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2, 4, 6, 9-13, 24, 26, and 29 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Comprotek (pub. Number De 215 25 335 A1).

Regarding claims 2 and 24, Comprotek discloses a porting of the casing (3, 4, 5, 6) is adapted to allow non compressible fluid to enter said chamber region and the casing comprising a discharge port (6) in communication with the sealed operating chamber as the volume of fluid is displaced (See Figures 1 and 3).

The recitation of ***"being adapted to allow non compressible fluid to enter said chamber region***" is considered as an intended use recitation. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably

distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to process of making, the intended use must result in a manipulative difference as compared to the prior art. See In re Casey, 152 USPQ 235 (CCPA 1967) and In re Otto, 136 USPQ 458, 459 (CCCPA 1963).

The recitation of "in communication with the sealed operating chamber as the volume of fluid is displaced" is considered as the functional language. Comprotek discloses all the structural components of an engine system, which are read on those of the instant invention. Therefore, the Comprotek system is capable of performing the same desired functions as the instant invention having been claimed in claims 2 and 24.

Regarding claims 4, 6, 9, 26 and 29, Comprotek discloses the casing (1) comprising a gas expansion region (9) and a gas inlet port (3) that is in communication with a gas expansion chamber that is defined by first and second surfaces of two adjacent fins and said first foot where the chamber is adapted to receive expanding gas that applies a torque to the outer rotor (7); and a gas entrance channel (3) that is adapted to receive a gas and the sealed operating chamber operates as a gas compression chamber that is adapted to compress gas and be discharged through an exit channel; wherein the gas is air (See Figures 1-3, Pages 4-8, lines 1-34).

The recitations of ***"the chamber being adapted to receive expanding gas that applies a torque to the outer rotor"*** and ***"a gas entrance channel***

being adapted to receive a gas and the sealed operating chamber operates as a gas compression chamber being adapted to compress gas and be discharged through an exit channel are considered as an intended use recitation. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to process of making, the intended use must result in a manipulative difference as compared to the prior art. See In re Casey, 152 USPQ 235 (CCPA 1967) and In re Otto, 136 USPQ 458, 459 (CCCPA 1963).

Regarding claim 10-13, Comprotek discloses the invention as recited in the rejection of claims 1 and 6, and further discloses a gas expansion region (9) and a gas inlet port (3) (See Rejection of claim 4 set forth above); a combustion chamber (19) where air is directed from the said exit channel to an inlet region of the said combustion chamber, the combustion chamber (19) further comprising an exit passage that is in communication with an expansion passage (See Figures 1-3); and the exiting gas from the expansion passage being used for output thrust work(See Figures 1-3, Pages 4-8, lines 1-34).

However, Comprotek fails to disclose a second expansion device.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a second expansion device, since it has been held that mere duplication of the essential working parts of a device

involves only routine skill in the art. St. Regis Paper Co. v. Bemis Co. , 193 USPQ 8 (CA 7 1977).

Note that in claim 12, lines 1-2, the limitation ***"being used for output thrust work"*** is an intended use recitation. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to process of making, the intended use must result in a manipulative difference as compared to the prior art. See In re Casey, 152 USPQ 235 (CCPA 1967) and In re Otto, 136 USPQ 458, 459 (CCCPA 1963).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3, 5, 25 and 28 rejected under 35 U.S.C. 103(a) as being unpatentable over Comprotek (Pub. Number DE 25 25 335 A1), in view of Plevyak (Patent Number 3,850,150).

Comprotek discloses the invention as recited in the rejection of claim 1 and 6; however, Comprotek fails to disclose the ratio of r_i / r_o being less than 1/2.

Plevyak teaches that it is conventional in the rotary piston combustion engine art, to utilize the ratio of r_i/ r_o being less than ½ (clearly seen in Figures 1 and 3).

It would has been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized the ratio of r_i/ r_o being less than ½, as taught by Plevyak, to improve the efficiency of the Comprotek device.

Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Comprotek (Pub. Number DE 25 25 335 A1), in view of Design choice.

Comprotek discloses the invention as recited above; however, Comprotek fails to disclose said sealed chamber being maintained for five degrees and for fifteen degrees of rotation of the inner rotor.

One having an ordinary skill in the rotary piston engine art, would have found said sealed chamber being maintained for five degrees and for fifteen degrees of rotation of the inner rotor, as a matter of design choice depending on the engine requirements. Moreover, there is nothing in the record which establishes that the claimed sealed chamber being maintained for five degrees and for fifteen degrees of rotation of the inner rotor, presents a novel of unexpected result (See In re Kuhle, 526 F. 2d 553, 188 USPQ 7 (CCPA 1975)).

Allowable Subject Matter

Claims ***31-37*** are allowed.

Claims ***8, 14-16, and 30*** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai-Ba Trieu whose telephone number is (571) 272-4867. The examiner can normally be reached on Monday - Thursday (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Additionally, the new Central FAX Number **(571) 273-8300** is effective on **July 15, 2005**. The old number (703-872-9306) will be routed to the new number until September 15, 2005.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTB
July 21, 2005

Thai-Ba Trieu
Primary Examiner
Art Unit 3748